Application No. 10/722,378

Paper Dated: August 2, 2005

In Reply to USPTO Correspondence of April 11, 2005

Attorney Docket No. 4149-032329

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the

application:

**Listing of Claims** 

Claims 1-25 (cancelled).

Claim 26 (currently amended): Pancreatic islet cells produced in vitro without serum

according to a method A composition comprising introducing a cell culture medium and pancreatic

islet cells <u>cultured</u> into a <u>in said</u> cell culture medium *in vitro*, said culture medium comprising 1-150

mg/L arginine; 1-120 mg/L proline; 1-3050 mg/L nicotinamide; 0.1-100 mg/L transferrin chelated

with iron; greater than 10<sup>-11</sup> M insulin or insulin-like growth factors; 10<sup>-12</sup> M-10<sup>-3</sup> M glucocorticoid

steroid; 1-6000  $\mu$ g/L zinc salt; 1-250  $\mu$ g/L manganese salt; 1-1000  $\mu$ g/L copper salt; 1-150  $\mu$ g/L

selenium salt; 2.0-10.0 mM L-glutamine; 0.01-5.0 g/L D-galactose or 0.01-5.0 g/L D-glucose, or

when both D-galactose and D-glucose are included together, 0.01-8.0 g/L, and culturing said

introduced cells in said medium.

Claim 27 (currently amended): Pancreatic islet cells The composition as in claim 26

wherein said method further comprises expanding said introduced cellspancreatic islet cells are

expanded in said medium.

Claim 28 (cancelled).

Claim 29 (currently amended): Pancreatic islet cells The composition as in claim 26

wherein said method further comprises culturing said pancreatic islet cells to a less differentiated state

by allowing cell proliferation to occur for sufficient time, and causing said less differentiated cells to

develop the characteristics of the introduced pancreatic islet cells, wherein said developing of

pancreatic islet cell characteristics is brought about by a method selected from the group consisting of

addingfurther comprising extracellular matrix material and allowing the less-differentiated cells to

reach confluence.

Claim 30 (currently amended): Pancreatic islet cells The composition as in claim 29

wherein said matrix comprises one or more of fibronectin, collagen, laminin, and polylysine.

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Claim 31 (currently amended): <u>Pancreatic islet cells The composition</u> as in claim 29 wherein said matrix comprises one or more of entactin, laminin and collagen type IV.

Claim 32 (currently amended): <u>Pancreatic islet cells The composition</u> as in claim 26 wherein said <u>method further comprises culturing said introduced cells in said medium, and allowing cellcells exhibit</u> proliferation and clonal growth to occur by culturing the pancreatic islet cells under appropriate conditions and for a sufficient time in the culture medium to produce said clonal growth.

Claims 33-35 (cancelled).

Claim 36 (currently amended): <u>Pancreatic islet cells The composition</u> as in claim 26 wherein said culture medium further comprises at least one additional growth factor.

Claim 37 (currently amended): Pancreatic islet cells The composition as in claim 36 wherein said additional growth factor is selected from the group consisting of HGF/SF, EGF, and TGFα.

Claims 38-43 (cancelled).